

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for ~~the generation of~~generating cells producing pancreatic hormone, comprising:

[[- a]]cultivation and differentiation of pluripotent stem cells obtained from differentiated exocrine glandular tissue of an organism, and having a capacity to form organoid bodies.

2. (Currently Amended) The process according to Claim 1, ~~in which~~wherein stem cells isolated primarily from the organism are cultivated and differentiated.

3. (Currently Amended) The process according to Claim 1, ~~in which~~wherein an aggregation of the stem cells to organoid bodies is provided.

4. (Currently Amended) The process according to Claim 3, ~~in which~~wherein the differentiation of the stem cells is carried out in the organoid bodies.

5. (Currently Amended) The process according to Claim 3, ~~in which~~wherein stem cells isolated secondarily from the organoid bodies are cultivated and differentiated.

6. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~Claim 1, wherein a stimulation of the generation of cells producing pancreatic hormone that comprises a stimulated propagation of the cells producing pancreatic hormone and/or a stimulated differentiation of the stem cells is provided.

7. (Currently Amended) The process according to Claim 6, ~~in which~~wherein the stimulation comprises:

(a) at least one ~~of the following~~ stimulation treatments selected from the group consisting of:

[[-]] treatment with supernatants of a primary culture of ~~the~~ endocrine pancreas,

[[-]] treatment with supernatants of cell lines of ~~the~~ endocrine pancreas,

[[-]] co-culture with differentiated cells of ~~the~~ endocrine pancreas,

[[-]] co-culture with cell lines of ~~the~~ endocrine pancreas, ~~or~~ and

[[-]] treatment with immobilized molecular growth factors,

[[-]](b) activation of at least one gene ~~that is~~ involved in the differentiation of stem cells into the cells producing pancreatic hormone, and

[[-]](c) treatment with molecular growth factors dissolved in a liquid.

8. (Currently Amended) The process according to Claim 7, ~~in which~~wherein the treatment with immobilized molecular growth factors comprises a cellular imprinting with molecular differentiation factors immobilized on a carrier.

9. (Currently Amended) The process according to Claim 8, ~~in which~~wherein a synthetic substrate, a cell membrane or a three-dimensional matrix substrate is used as carrier.

10. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~ Claim 1, wherein an identification and selection of the cells producing pancreatic hormone is provided

11. (Currently Amended) The process according to Claim 10, ~~in which~~wherein the selection of the cells producing pancreatic hormone comprises a cell sorting process

12. (Currently Amended) The process according to Claim 10 ~~or 11~~, ~~wherein~~in which non-identified and selected cells are subjected to a further cultivation and differentiation.

13. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~Claim 1, wherein stem cells ~~that were~~ obtained from secretory glands or glands of ~~the a~~a gastrointestinal tract of the organism are used.

14. (Currently Amended) The process according to Claim 13, ~~in which~~wherein stem cells ~~that were~~ obtained from ~~the a~~a pancreas or ~~the a~~a salivary gland of the organism are used.

15. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~Claim 1, wherein stem cells from glandular tissue that is acinar tissue are used.

16. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~Claim 1, wherein stem cells from a vertebrate, ~~preferably a mammal~~ are used.

17. (Currently Amended) The process according to Claim 16, ~~in which~~wherein stem cells from a primate, ~~especially a human being~~ are used.

18. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~Claim 1, wherein the cells producing pancreatic hormone are used for pharmaceutical applications.

19. (Currently Amended) The process according to Claim 18, ~~in which~~wherein the cells producing pancreatic hormone are used for ~~the treatment of~~treating pancreatic diseases, a metabolic syndrome or metabolic diseases.

20. (Currently Amended) The process according to Claim 19, ~~in which~~wherein the cells producing pancreatic hormone are used for ~~the treatment of~~treating diabetes, hyperglycemia or impaired glucose tolerance.

21. (Currently Amended) The process according to ~~at least one of the preceding claims, in which~~Claim 1, wherein the cells producing pancreatic hormone produce insulin.

22. (Currently Amended) An isolated cell producing pancreatic hormone, the cell having been generated from a pluripotent stem cell that was isolated from differentiated exocrine glandular tissue of an organism, and having a capacity to form organoid bodies.

23. (Original) The isolated cell producing pancreatic hormone according to Claim 22, which is a human cell.

24. (Currently Amended) A cellular composition containing a plurality of cells producing pancreatic hormone according to Claim 22-~~or 23~~.

25. (Currently Amended) The cellular composition according to Claim 24, ~~in which~~wherein the cells producing pancreatic hormone are generated ~~with~~by a process ~~according to at least one of Claims 1 to 21~~ comprising cultivation and differentiation of pluripotent stem cells obtained from differentiated exocrine glandular tissue of an organism, and having a capacity to form organoid bodies.

26. (Currently Amended) The cellular composition according to Claim 24-~~or 25~~, which additionally contains other cell types.

27. (Currently Amended) The cellular composition according to Claim 26, ~~in~~
~~which~~wherein the other cell types comprise stem cells and/or neighboring cells of islets of
Langerhans in pancreatic tissue.

28. (Currently Amended) The cellular composition according to one of Claims 24 ~~to~~
27, which contains a casing or matrix material.

Claim 29-31 (Canceled).

32. (Currently Amended) Artificial islets of Langerhans containing a cell according to
Claim 22 ~~or 23 or a composition according to Claim 24~~.

33. (Currently Amended) A pharmaceutical composition containing:

[[-]] at least one cell according to Claim 22 ~~or 23 or at least one cellular composition~~
~~according to Claim 24~~, and

[[-]] a pharmaceutical carrier substance.

34. (New) The pharmaceutical composition of claim 33, which is autologous.

35. (New) A pharmaceutical composition containing:

at least one cellular composition according to Claim 24, and

a pharmaceutical carrier substance.

36. (New) The pharmaceutical composition of claim 35, which is autologous.

37. (New) Artificial islets of Langerhans containing at least one cellular composition
according to Claim 24.

38. (New) A medical transplant or medical device comprising at least one cell according to Claim 22.

39. (New) A medical transplant or medical device comprising at least one cellular composition according to Claim 24.

40. (New) The process according to Claim 1, wherein the stem cells are from a mammal.

41. (New) The process according to Claim 1, wherein the stem cells are from a human.